AMENDMENTS

IN THE CLAIMS:

1. (Twice Amended) A method of administering a synthetic plasma-like solution that does not comprise a conventional biological buffer to a subject in need thereof, said method comprising:

(a) first reducing the level of CO_2 in said subject in an amount sufficient to reduce the risk of acidosis/acidemia; and

(b) then administering said plasma-like solution to said subject.

2. (Original) The method according to Claim 1, wherein said method comprises reducing at least one of the blood level and brain level CO_2 of said subject.

3. (Original) The method according to Claim 1, wherein said subject has at least a sub-physiologic blood flow.

4. (Original) The method according to Claim 1, wherein said subject is in circulatory arrest.

5. (Original) The method according to Claim 1, wherein said subject suffers from hypovolemia.

6. (Original) The method according to Claim 1, wherein said subject suffers from hyphemia.

7. (Original) The method according to Claim 1, wherein said subject suffers from low blood pressure.

8. (Original) The method according to Claim 1, wherein said subject is undergoing surgery.

9. (Original) The method according to Claim 8, wherein said surgery is low temperature surgery.

10. (Original) The method according to Claim 8, wherein said surgery is stopped heart surgery.

11. (Original) The method according to Claim 8, where said surgery includes replacing at least a portion of the blood of said subject with said synthetic plasma like solution.

12. (Original) The method according to Claim 1, wherein said CO_2 level is reduced using a mechanical means.

13. (Original) The method according to Claim 1, wherein said CO_2 level is reduced using a pharmacological means.

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14. (Currently Amended) The method according to Claim 1, wherein said synthetic plasma like solution comprises:

R2

electrolytes;

a dynamic buffering system; and

at least one oncotic agent;

~~wherein said solution does not comprise a biological buffer~~.

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15. (Original) The method according to Claim 14, wherein said dynamic buffering system comprises bicarbonate.

16. (Original) The method according to Claim 14, wherein said electrolytes of said plasma-like solution comprise sodium, potassium, calcium, chloride ion and magnesium.

17. (Original) The method according to Claim 14, wherein said solution further comprises a simple sugar.

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18. (Currently Amended) The method according to Claim 1, wherein said synthetic plasma like solution comprises:

R3

sodium, potassium, calcium, chloride ion and magnesium electrolytes;

bicarbonate; and

at least one starch oncotic agent; and

a simple sugar;

~~wherein said solution does not comprise a biological buffer~~.

19. (Currently Amended) A system for administering a synthetic plasma-like solution to a subject in need thereof, said system comprising:

(a) a synthetic plasma-like solution that does not comprise a conventional biological buffer;

and

(b) a pharmacological means not including sodium bicarbonate for reducing the CO_2 level of a subject in an amount sufficient to reduce the risk of acidosis/acidemia.

20. (Cancel)

21. (Cancel)

22. (Currently Amended) A kit for administering a synthetic plasma-like solution to a subject in need thereof, said ~~system~~ kit comprising:

(a) a synthetic plasma-like solution that does not comprise a conventional biological buffer;

and

(b) a pharmacological means not including sodium bicarbonate for reducing the CO_2 level of a subject in an amount sufficient to reduce the risk of acidosis/acidemia.

23. (Cancel)

24. (Cancel)

25. (Previously Amended) The kit according to Claim 22, wherein said kit further comprises instructions for reducing the level of CO_2 in a subject in an amount sufficient to reduce the risk of acidosis/acidemia and administering said plasma-like solution to said subject.